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The rejection of Claim 17 under 35 U.S.C. § 102(b) as being anticipated by Larsen et al., U.S. Patent No. 4,332,992 (hereinafter referred to as "Larson") is respectfully traversed.

Larson describes a combination electric convection and microwave oven 10 having an oven cavity 12, an electrical resistance heater 17, a magnetron 18, a dual-end blower 19, and a control panel 20 surrounded by a cabinet 14. The control panel includes of an oven cycle timer 22, "START", "STOP", and "LIGHT" push buttons numbered 24, 26, and 28, respectively, a temperature sensing probe controls 30, a variable power controls 32 for controlling the ratio of microwave energy to thermal energy applied to the oven cavity when in the "COMBINATION" and "MICROWAVE" modes, a cooking method controls 34, and a convection heater temperature level controls 36.

The cooking method controls control the operation of the oven in three different modes or types of cooking sequences. A "CONVECTION" push button 38 allows the oven to operate as a convection oven only, (i.e.) no microwave energy is applied during this mode of operation. A "COMBINATION" push button 40 applies alternately thermal heat and microwave radiation to the oven cavity in a predetermined ratio as set by the variable power controls. A "MICROWAVE" push button 42, when actuated, activates the magnetron but not the heater to provide microwave energy to the cavity. Notably, Larson is silent with respect to radiant energy and a radiant heat source.

Claim 17 recites an oven including "a cooking cavity; a plurality of modules for delivering energy into said cooking cavity, said energy comprising radiant energy, microwave energy, and thermal energy; and a control operatively connected to said modules for controlling delivery of energy to said cooking cavity, said control configured to operate said modules in a microwave cooking mode, a convection / bake cooking mode, and a speedcook mode".

Larson neither describes nor suggests an oven including a cooking cavity, a plurality of modules for delivering energy into the cooking cavity, the energy including radiant energy, microwave energy, and thermal energy, and a control operatively connected to the modules for

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controlling delivery of energy to the cooking cavity, the control configured to operate the modules in a microwave cooking mode, a convection / bake cooking mode, and a speedcook mode. Moreover, Larson neither describes nor suggests a plurality of modules for delivering energy into the cooking cavity, the energy including radiant energy, microwave energy, and thermal energy. Rather, Larson has an electrical resistance heater and a magnetron for applying thermal heat and microwave energy to the oven cavity.

For the reasons set forth above, Claim 17 is submitted to be patentable over Larson.

For the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claim 17 be withdrawn.

The rejection of Claims 1-14 and 18-28 under 35 U.S.C. § 103 as being unpatentable over Larson in view of Boehm, U.S. Patent No. 3,320,396, (hereinafter referred to as "Boehm") or in view of Tanabe, U.S. Patent No. 4,463,238, (hereinafter referred to as "Tanabe") is respectfully traversed.

Larson is described above. Boehm describes an oven chamber 10 which is adapted to receive and surround an object 11 to be heated. The oven chamber includes upper and lower walls 12 and 14, a rear wall 15, two side walls (not visible), and a front wall having a door 16 provided with a handle 17 and pivoted at 18 to swing between open and closed position. Elements 24 and 25 are rod-like members folded back upon themselves to lie in upper and lower horizontal planes. High frequency microwave electrical energy is coupled to the elements so that they act as antennas which radiate that energy into the oven chamber where it is absorbed by and causes heating within the object. Additionally means are provided to pass current through the resistive conductors of the elements to provide heat within the oven chamber by a resistance heating mode of operation. This heat energy serves to heat the object, and indeed to produce a browning action on the surface thereof which is not normally produced by the action of microwave energy. The elements may function solely to radiate microwave energy, solely to

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produce resistance type heating action, or simultaneously to produce both microwave and resistance type heating actions.

Tanabe describes an oven wall 10 for defining an oven cavity, and an oven door 12. A magnetron 14 is secured to the oven wall for supplying the microwave energy into the oven cavity through a wave guide 16 and an energy supply outlet 18. A tray 22 is disposed at the bottom of the oven cavity for supporting a foodstuff 24 to be cooked in the oven cavity. A blower fan is provided to cool the magnetron. The air flow generated by the blower fan is introduced into the oven cavity through an air inlet 28. The introduced air is exhausted from the oven cavity through exhaust openings 30 which are formed in the upper wall of the oven cavity. An exhaust duct 32 is secured to the upper wall of the oven cavity to cover the exhaust openings. A gas sensor 34 is secured to exhaust duct for detecting the concentration of the gas exhausted from the oven cavity. The combined microwave and electric heating oven of Figure 1 further includes an upper heater 20, and a lower heater 26 for electric heating cooking purposes. A thermistor 36 is secured to oven wall for detecting the temperature within the oven cavity.

Applicants respectfully submit that the Section 103 rejection of the presently pending claims is not a proper rejection. Obviousness cannot be established by merely suggesting that it would have been an obvious to one of ordinary skill in the art to modify Larson according to the teachings of Boehm and/or Tanabe. More specifically, as is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. None of Larson, Boehm, and Tanabe, alone or in combination, describe or suggest the claimed combination. Furthermore, in contrast to the assertion within the Office Action, Applicants respectfully submit that it would not be obvious to one skilled in the art to combine Larson with Boehm and/or Tanabe because there is no motivation to combine the references suggested in the art. Rather, the Examiner has not pointed to any prior art that teaches or suggests to combine the disclosures, other than Applicants' own teaching. Only the conclusory statement that "[i]t would have been

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obvious to one having ordinary skill in the art at the time the invention was made to modify Larson to use another resistor heater on the lower part of the oven cavity so that food can be heated from above and/or below the food for more selective cooking and/or more uniform cooking result, in view of the teaching of Boehm or Tanabe" suggests combining the disclosures. Applicants respectfully submit however, that the prior art teaches away from the present invention. More specifically, none of Larson, Boehm, and Tanabe, alone or in combination, describe or suggest an upper heater module including at least one radiant heat source.

As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicants' disclosure. In re Vaack, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion or motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown. Specifically, the Examiner has not pointed to any prior art that teaches or suggests a reasonable expectation of success or motivation in combining the disclosures, other than Applicants' own teaching.

Furthermore, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the art to deprecate the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejection is based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Specifically, Larson is cited for an oven having a cooking cavity and a plurality of modules for delivering energy into the cavity, and Boehm and Tanabe are cited for

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the use of a lower heater. Since there is no teaching, suggestion, or motivation in the cited art for the claimed combination, the Section 103 rejection appears to be clearly based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicants request that the Section 103 rejection of Claims 1-14, and 18-28 be withdrawn.

Further, and to the extent understood, none of Larson, Boehm, and Tanabe, considered alone or in combination, describe or suggest the claimed combination, and as such, the presently pending claims are patentably distinguishable from the cited combination. Specifically, Claim 1 recites an oven including "a cooking cavity; an RF generation module for delivering microwave energy into said cooking cavity; an upper heater module comprising at least one radiant heat source; a lower heater module; and a control operatively connected to said RF generation module, said upper heater module, and said lower heater module for selective control thereof".

None of Larson, Boehm, and Tanabe, alone or in combination, describe or suggest an oven including a cooking cavity, an RF generation module for delivering microwave energy into the cooking cavity, an upper heater module comprising at least one radiant heat source, a lower heater module, and a control operatively connected to the RF generation module, the upper heater module, and the lower heater module for selective control thereof. Rather, Larson, Boehm, and Tanabe each describe an electrical resistance heater and a microwave heater. None of Larson, Boehm, and Tanabe, alone or in combination, describe or suggest an upper heater module including at least one radiant heat source.

Claim 1 is therefore submitted to be patentable over Larson in view of Boehm and/or Tanabe. When the recitations of Claims 2-14 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2-14 likewise are patentable over Larson in view of Boehm and/or Tanabe.

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Claim 17, recites an oven including "a cooking cavity; a plurality of modules for delivering energy into said cooking cavity, said energy comprising radiant energy, microwave energy, and thermal energy; and a control operatively connected to said modules for controlling delivery of energy to said cooking cavity, said control configured to operate said modules in a microwave cooking mode, a convection / bake cooking mode, and a speedcook mode".

None of Larson, Boehm, and Tanabe, alone or in combination, describe or suggest a oven including a cooking cavity, a plurality of modules for delivering energy into the cooking cavity, the energy including radiant energy, microwave energy, and thermal energy, and a control operatively connected to the modules for controlling delivery of energy to the cooking cavity, the control configured to operate the modules in a microwave cooking mode, a convection / bake cooking mode, and a speedcook mode. Rather, Larson, Boehm, and Tanabe describe only thermal energy and microwave energy. None of Larson, Boehm, and Tanabe, alone or in combination, describe or suggest an a plurality of modules for delivering energy into the cooking cavity, the energy including radiant energy, microwave energy, and thermal energy.

Claim 17 is therefore submitted to be patentable over Larson in view of Boehm and/or Tanabe.

Claims 18-28 depend, directly or indirectly, from independent Claim 17. When the recitations of Claims 18-28 are considered in combination with the recitations of Claim 17, Applicants submit that dependent Claims 18-28 likewise are patentable Larson in view of Boehm and/or Tanabe.

The rejection of Claims 15 and 16 under 35 U.S.C. § 103 as being unpatentable over Larson in view of Boehm or Tanabe as applied to claims 1-14 and 18-28, and further in view of McKee et al., U.S. Patent No. 6,060,701, (hereinafter referred to as "McKee") or in view of Ishifuro et al., U.S. Patent No. 4,831,225, (hereinafter referred to as "Ishifuro") is respectfully traversed.

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Larson, Boehm, and Tanabe are described above.

McKee describes an oven 10 including a housing 14, a cooking chamber 16 which is adapted to receive a food product 12 for cooking, and a conduit 20 for selectively providing gaseous communication external to the cooking chamber, between the bottom and top of the cooking chamber.

Operation of a thermal energy source 25 may be controlled by a control means 250 which includes a thermostat and a cutoff switch which cuts off power to the thermal energy source under at least two conditions. In the first condition, the power supply is being used for the magnetron or hot air blower, and there is insufficient power to enable magnetron 100, hot air blower motor 40a and heating means to be simultaneously operated. In the second condition, either the actual temperature of the thermal energy source or the actual temperature of the air entering the cooking chamber exceeds a "set" temperature. To this end, the thermal energy source and the entry to the cooking chamber are preferably provided with separate temperature-sensing mechanisms 30 and 30' (such as a thermocouple or resistive thermal device) positioned so as to measure the temperature of the air at these critical points.

Ishifuro describes a control panel having thereon a key for selecting the desired cooking mode from various modes such as heater cooking and microwave cooking, various function keys, numeric keys for setting a cooking temperature and cooking time, a start key for starting a cooking operation and a display. Element 2 is a control device such as a micro processor (MPU) that controls the operation of the microwave oven. Element 3 is a power supply source which controls power supply to a microwave generating device 4 such as a magnetron as heating means for the microwave oven, a heater cooking device 5 and a blower 6 according to a control signal from the control device. Element 7 is temperature sensor means such as a thermistor which detects the heating chamber temperature. Element 8 is a damper that opens or closes due to the shape memory effect of a shape memory alloy. When the temperature in the heating chamber rises, the shape memory alloy resumes its memorized shape due to the heat, allowing the damper

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to close the blowhole provided for supplying ventilating air from the blower to the heating chamber.

Applicants respectfully submit that the Section 103 rejection of the presently pending claims is not a proper rejection. Obviousness cannot be established by merely suggesting that it would have been an obvious to one of ordinary skill in the art to modify Larson according to the teachings of Boehm, Tanabe, McKee and/or Ishifuro. More specifically, as is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination. None of Larson, Boehm, Tanabe, McKee, and Ishifuro, alone or in combination, describe or suggest the claimed combination. Furthermore, in contrast to the assertion within the Office Action, Applicants respectfully submit that it would not be obvious to one skilled in the art to combine Larson with Boehm, Tanabe, McKee, and/or Ishifuro because there is no motivation to combine the references suggested in the art. Rather, the Examiner has not pointed to any prior art that teaches or suggests to combine the disclosures, other than Applicants' own teaching. Only the conclusory statement that "[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Larson to provide a temperature sensing system to monitor the temperature of the cooking cavity to feedback control the operation of the oven components such as, the heater, the microwave source and/or the blower for more precise heating control and better cooking result, in view of the teaching of McKee or Ishifuro" suggests combining the disclosures. Applicants respectfully submit however, that the prior art teaches away from the present invention. More specifically, none of Larson, Boehm, Tanabe, McKee, and Ishifuro, considered alone or in combination, describe or suggest an upper heater module including at least one radiant heat source.

As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such

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references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicants' disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither a suggestion or motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown. Specifically, the Examiner has not pointed to any prior art that teaches or suggests a reasonable expectation of success or motivation in combining the disclosures, other than Applicants' own teaching.

Furthermore, it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the cited art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the art to deprecate the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. The present Section 103 rejection is based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Specifically, Larson is cited for an oven having a cooking cavity and a plurality of modules for delivering energy into the cavity, and Boehm and Tanabe are cited for the use of a lower heater, McKee is cited for a temperature sensing sensor to control the operation of the thermal energy source, and Ishifuro is cited for a temperature sensor to sense the oven air temperature. Since there is no teaching, suggestion, or motivation in the cited art for the claimed combination, the Section 103 rejection appears to be clearly based on a hindsight reconstruction in which isolated disclosures have been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason alone, Applicants request that the Section 103 rejection of Claims 15 and 16 be withdrawn.

Further, and to the extent understood, none of Larson, Boehm, Tanabe, McKee, and Ishifuro considered alone or in combination, describe or suggest the claimed combination, and as such, the presently pending claims are patentably distinguishable from the cited combination.

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Specifically, Claims 15 and 16 depend from Claim 1 which recites an oven including "a cooking cavity; an RF generation module for delivering microwave energy into said cooking cavity; an upper heater module comprising at least one radiant heat source; a lower heater module; and a control operatively connected to said RF generation module, said upper heater module, and said lower heater module for selective control thereof".

None of Larson, Boehm, Tanabe, McKee, and Ishifuro, alone or in combination, describe or suggest oven including a cooking cavity, an RF generation module for delivering microwave energy into the cooking cavity, an upper heater module comprising at least one radiant heat source, a lower heater module, and a control operatively connected to the RF generation module, the upper heater module, and the lower heater module for selective control thereof. Rather, Larson, Boehm, and Tanabe each describes electrical resistance heaters and a microwave heater, and McKee and Ishifuro describe temperature sensors. Nowhere does Larson, Boehm, Tanabe, McKee, and Ishifuro describe or suggest an upper heater module including at least one radiant heat source.

Claim 1 is therefore submitted to be patentable over Larson in view of Boehm, Tanabe, McKee, and/or Ishifuro. When the recitations of Claims 15 and 16 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 15 and 16 likewise are patentable over Larson in view of Boehm, Tanabe, McKee, and/or Ishifuro.

For the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 1-16 and 18-28 be withdrawn.

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In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



Thomas M. Fisher
Registration No. 47,564
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Graves et al.

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Art Unit: 3742

Serial No.: 09/758,611

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Examiner: Leung, Philip H.

Filed: January 11, 2001

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For: SPEEDCOOKING OVEN
INCLUDING CONVECTION /
BAKE MODE

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GROUP 3700

SUBMISSION OF MARKED UP CLAIMS

Mail Stop: Non-Fee Amendment
Hon. Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

In furtherance of the response to the Office Action dated April 23, 2003 submitted

Herewith, Applicants hereby submit marked up versions of the amendments therein:

IN THE CLAIMS

Please cancel Claim 2 without prejudice.

1. (once amended) An oven comprising:

a cooking cavity;

an RF generation module for delivering microwave energy into said cooking
cavity;

an upper heater module comprising at least one radiant heat source [for
convection cooking];

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a lower heater module; and

a control operatively connected to said RF generation module, said upper heater module, and said lower heater module for selective control thereof.

Respectfully Submitted,



Thomas M. Fisher
Registration No. 47,564
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070